



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

VARIATION NOTES.¹

CARL H. EIGENMANN AND CLARENCE KENNEDY.

1. We have received twelve specimens of the cave salamander, *Spelerpes maculicaudus*, from Marble Cave, Mo., and other caves in the neighborhood. With one exception they presented the usual appearance of this species. They were red with dark spots bilaterally unsymmetrically scattered over the back and sides. The spots are subcircular and differ considerably in size. On the sides of the head and body and tail the spots not infrequently become confluent and give rise to short bars usually with their longer axes lengthwise of the specimens. Separating the dotted dorsal surface from the immaculate lower surface, there is an interrupted streak of dark much less intensely pigmented than the spots of the back. In a melanistic specimen from Rockhouse Cave, Mo., this lateral streak has become broad enough to cover the sides with a mottled pattern. The lower surface of the head is always more or less evenly peppered with isolated pigment cells.

The specimen to which attention is called is one exhibiting undoubted melanism. The lower surface of the head is more densely pigmented than in the other specimens. The sides are more uniformly pigmented than in the melanistic individual from Rockhouse. The sides of the head, body, the arms, and anterior surface of the legs are uniformly pigmented, except a few small blotches or spots. The pigmentation is not as intense as in the dorsal spots. The most striking deviation is found on the dorsal surface. The usual spots are present, rather smaller than in the other specimens. The intervening spaces are more densely covered with pigment cells than in the normal specimens and in several places, notably the head, the nape, and one or two places on the back the spots seem to have "*run*," their closely compacted pigment cells having been distributed in a thinner coat over a wider area and formed, with the similarly distributed pigment of other spots, diffuse, evenly pigmented blotches. In life

¹ Contributions from the Zoölogical Laboratory of Indiana University, No. 52.

the specimen suggested that the inhibitory force which kept these color cells from spreading, or the positive tropism which kept them together, was dissolved and the cells scattered evenly in a single layer over the surrounding region. The centers of distribution are still distinguishable as darker areas at the margin of or in the blotches. In the nape, for instance, four spots that were in part responsible for the blotch are seen at its four corners. It is very probable that color cells in addition to those originally forming the spots are concerned in forming the blotches.

2. A specimen of *Pygidium rivulatum*, 195 mm. long, a catfish from Lake Titicaca, has on the left side, in the place of the normal maxillary barbel, one which is dichotomously branched near its base into a dorsal and ventral branch. The dorsal branch is evidently the normal barbel, the ventral being the adventitious one. The ventral branch is but slightly shorter than the dorsal branch which is itself a little shorter than its fellow of the right side.

3. A specimen of *Xiphorhamphus jenynsii*, 155 mm.

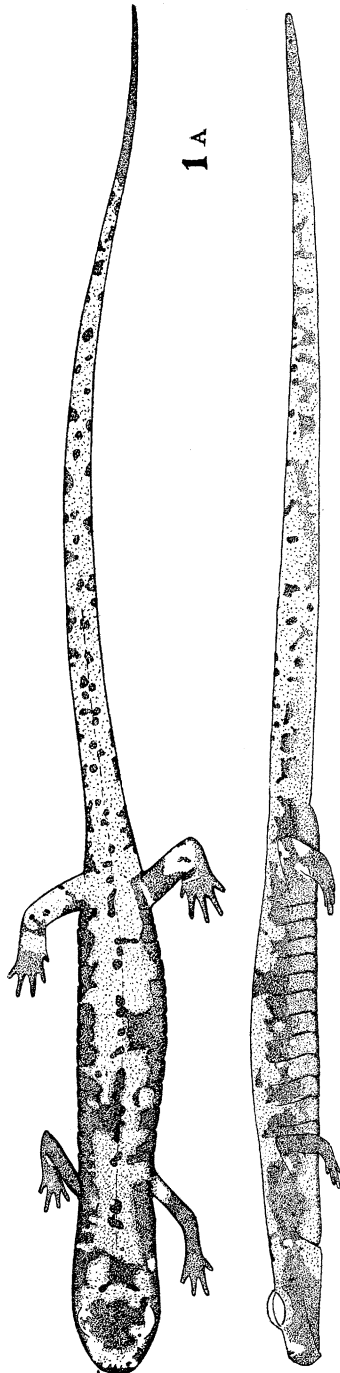
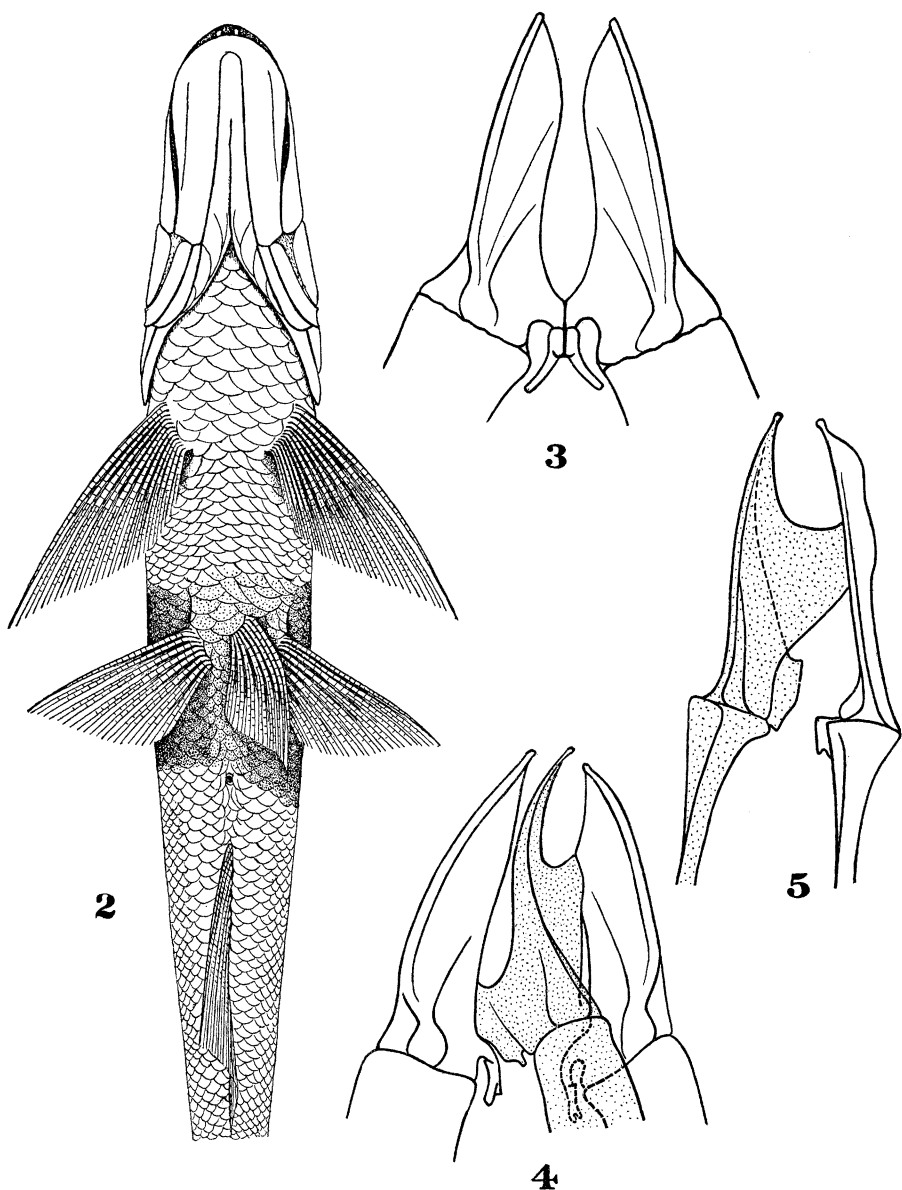


FIG. 1. *Spelerpes maculicaudus*.



- FIG. 2. Ventral surface of a *Xiphorhamphus jenynsii* with an adventitious ventral.
 FIG. 3. The innominate bones of a normal *Xiphorhamphus*.
 FIG. 4. The innominate bones of the specimen figured in 2.
 FIG. 5. Left innominate and adventitious innominate from the left.

long, from the Rio Grande do Sul possesses an adventitious left ventral. The right and left ventrals are normally developed and of equal size. The left ventral is possibly placed a little higher than the right. The adventitious ventral is placed between the two normal ventrals slightly in advance of them and near the left one. It is shorter — 15 mm. as compared with 19 mm. — than the normal ventrals. It possesses one ray less — 8 instead of 9 — than the normal ones and its first ray is bent sickle-fashion.